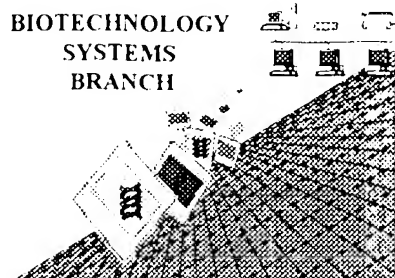


## RAW SEQUENCE LISTING ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 101005, 333  
Source: DIPE  
Date Processed by STIC: 12/19/01

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by the treatment given to all mail coming via the Brentwood Mail Facility.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom, including:

1. EFS-Bio (<<http://www.uspto.gov/efb/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)

2. U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202

3. Hand Carry directly to:

U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name,  
1911 South Clark Street, Crystal Mall One, Sequence Information, Arlington, VA 22202

Or

U.S. Patent and Trademark Office, 2011 South Clark Place, Customer Window, Box Sequence, Crystal Plaza Two,  
Lobby, Room 1B03, Arlington, Virginia 22202

4. Federal Express Delivery, 2011 South Clark Street, Crystal Plaza 2, Room 1B03-Mailroom, Box Sequence,  
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OIPE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/005,338

DATE: 12/14/2001

TIME: 11:07:27

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Output Set: N:\CRF3\12142001\I005338.raw

Does Not Comply  
Corrected Diskette Needed

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 GENES, VECTORS  
 6 CONTAINING SUCH NUCLEIC ACIDS AND USES THEREOF  
 8 <130> FILE REFERENCE: ABCA5, 6, 9, 10  
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/005,338  
 11 <141> CURRENT FILING DATE: 2001-12-07  
 13 <160> NUMBER OF SEQ ID NOS: 217  
 15 <170> SOFTWARE: PatentIn Ver. 2.1

→ The type of errors shown exist throughout  
 the Sequence Listing. Please check subsequent  
 sequences for similar errors.

## ERRORED SEQUENCES

invalid  
 can only be DNA, RNA, or PRT

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## RAW SEQUENCE LISTING

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212 ggggtctcagg aaagcggacg cgaggctcgc catcgcaaga ttagtgagtg ctttcaaact 4380
213 gcatgagcag ctgaatgttc ctgtgcagaa attaacagca ggaatcacga gaaagtgtg 4440
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215 catagacccc agcggcagc agcaaattg gcaggcaatc caggcagtcg ttaaaaacac 4560
216 agagagaggt gtctctctga ccaccataa cctggctgag gcggaagcct tgtgtgaccg 4620
217 tgtggccatc atgggtgtctg gaaggcttag atgcattggc tccatccaac acctgaaaaa 4680
218 caaacttggc aaggattaca ttctagagct aaaagtgaag gaaacgtctc aagtgacttt 4740
219 ggtccacact gagattctga agcttttccc acaggctgca gggcaggaaa ggtattcctc 4800
220 tttgttaacc tataagctgc cgtggcaga cgtttacct ctatcacaga ctttccaaa 4860
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222 ggagaaggta ttcttagagc tttctaaaga acaggaagta ggaaattttg atgaagaaat 4980
223 tgatacaaca atgagatgga aactcctccc tcattcagat gaaccttaaa acctcaaacc 5040
224 tagtaatttt ttgttgatct cctataaact tatgttttat gtaataatta atagtatgtt 5100
225 taatttttaa gatcatttaa aattaacatc aggtatattt tgtaaattta gttaacaaat 5160
226 acataaattt taaaattatt ctctctctca aacatagggg tgatagcaaa cctgtgataa 5220
227 aggcaatata aaatattagt aaagtcaccc aaagagtcag gcactgggta ttgtggaaat 5280
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5296

231 &lt;210&gt; SEQ ID NO: 3

232 &lt;211&gt; LENGTH: 5981

E--&gt; 233 &lt;212&gt; TYPE: ADN

234 &lt;213&gt; ORGANISM: Homo sapiens

236 &lt;400&gt; SEQUENCE: 3

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238 tctctccag aacatgcaga gacccatgga tgaactgtgt ttctagattt ttctccagc 120
239 tttcttgaga gaaacaggctc aaaatgagca agagacgcat gagcgtgggt cagcaaacat 180
240 gggctcttct ctgcaagaac tgtctcaaaa aatggagaat gaaaagacag acctgtgttg 240
241 aatggctctt ttcatctctt ctggtactgt ttctgtacct atttttctcc aatttacatc 300
242 aagttcatga cactcctcaa atgtcttcaa tggatctggg acgtgtagat agttttaatg 360
243 atactaatta tgttattgca tttgcacctg aatccaaaac tacccaagag ataatgaaca 420
244 aagtggcttc agcccatctc ctaaaaggaa gaacaatcat ggggtggcct gatgaaaaaa 480
245 gcatggatga attggatttg aactattcaa tagacgcagt gagagtcatc tttactgata 540
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247 gagaccattc agctcactgt caagcagtga atgaaaaaat gaagtgtgaa ggttcagagt 660
248 tctgggagaa aggtcttgta gcttttcaag ctgccattaa tgctgctatc atagaaatcg 720
249 caacaaatca ttcagtgtg gaacagctga tgtcagttac tgggtgtacat atgaagatat 780
250 taccttttgt tgcccaagga ggagttgcaa ctgatttttt cattttcttt tgcattattt 840
251 ctttttctac atttatatac tatgtatcag tcaatgttac acaagaaaga caatacatta 900
252 cgtcattgat gacaatgatg ggactccgag agtcagcatt ctggccttcc tggggtttga 960
253 tgtatgctgg ctctatcctt atcatggcca ctttaatggc tcttattgta aaatctgcac 1020
254 aaattgtcgt cctgactggt tttgtgatgg tcttcacctc ctttctctc tatggcctgt 1080

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## RAW SEQUENCE LISTING

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DATE: 12/14/2001

TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

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257 atcttcctgc atttttggaa tggactttgt gtcttcttag cccctttgcc ttcactgttg 1260
258 ggatggccca gcttatacat ttggactatg atgtgaattc taatgccac ttggattctt 1320
259 cacaaaatcc atacctcata atagctactc ttttcatgtt ggtttttgac acccttctgt 1380
260 atttgggtatt gacattatat tttgacaaaa ttttgcccg c gaaatattga catcgatgtt 1440
261 ctcccttggt tttcctgaaa tctgtttttt ggtttcaaca cgggaagggt aatcatgttg 1500
262 tccttgagaa tgaaacagat tctgaccta cacctaata ctgttttgaa ccagtgtctc 1560
263 cagaattctg tgggaaggaa gccatcagaa tcaaaaatct taaaaaagaa tatgcaggga 1620
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265 ctgccctctc tggctcaggt ggagctggaa aaactacct gttaaacata cttagtgggt 1740
266 tgtcagttcc aacatcaggt tcagtcactg tctataatca cacactttca agaattggctg 1800
267 atatagaaaa tatcagcaag ttcactggat tttgtccaca atccaatgtg caatttggat 1860
268 ttctcactgt gaaagaaaa ctcaggctgt ttgctaaaat aaaagggtt ttgccacatg 1920
269 aagtggagaa agaggtacaa cgagttgtac aggaattaga aatggaaaat attcaagaca 1980
270 tccttgctca aaacttaagt ggtggacaaa ataggaaact aacttttggg attgccattt 2040
271 taggagatcc tcaagttttg ctattggatg aaccgactgc tggattggat cctctttcaa 2100
272 ggcaccgaat atggaatctc ctgaaagagg ggaaatcaga cagagtaatt ctcttcagca 2160
273 cccagtttat agatgaggct gacattctgg cggacaggaa ggtgttcata tccaatggga 2220
274 agctgaagtg tgcaggctct tctctgttcc ttaagaagaa atggggcata ggctaccatt 2280
275 taagtttgca tctgaatgaa aggtgtgatc cagagagtat aacatcactg gttaagcagc 2340
276 acatctctga tgccaaattg acagcacaaa gtgaagaaaa acttgtatat attttgcctt 2400
277 tggaaaggac aaacaaattt ccagaacttt acagggatct tgatagatgt tctaaccaag 2460
278 gcattgagga ttatggtgtt tccataacaa ctttgaatga ggtgtttctg aaattagaag 2520
279 gaaaatcaac tattgatgaa tcagatattg gaatttgggg acaattacaa actgatgggg 2580
280 caaaagatat aggaagcctt gttgagctgg aacaagtttt gtcttccttc cacgaaacaa 2640
281 ggaaaacaat cagtggcgtg gcgctctgga ggacagcagg ctgtgcaata gcaaaagttc 2700
282 gcttcctaaa gttaaagaaa gaaagaaaaa gcctgtggac tatattattg ctttttggta 2760
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285 tgaccattt actggtcctc aataagacag ggtcaacat tgataactt ttacattcac 2940
286 tgaggcgaca gaacatagct atagaagtgg atgccttgg aactagaaat ggcacagatg 3000
287 acccatctta caatggtgct atcattgtgt caggtgatga aaaggatcac agattttcaa 3060
288 tagcatgtaa taaaaacgg ctgaattgct ttctgtcct cctggatgtc attagcaatg 3120
289 gactacttgg aatttttaat tcgtcagaac acattcagac tgacagaagc acattttttg 3180
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293 tggatgtttc cctgtacttt ttgatcctcc tgctaattgca aataatggat tatattttta 3420
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295 gctatgtctc atctcttgtt ttcttgacat atgtgattt attcatttt cgcaatggga 3540
296 gaaaaaatag tggcatttgg tcatttttct tcttaattgt ggtcatcttc tcgatagttg 3600
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302 agcctgaagg agaggaggaa gatattcaga tggaaagaat gagaacagt aatgctatgg 3960
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## RAW SEQUENCE LISTING

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306 gtacaactat taagatgata actggagaca caaaaccaac tgcaggacag gtgattttga 4200
307 aaggagcggt tggaggggaa cccctgggct tccctggggt ctgccctcag gagaatgcgc 4260
308 tgtggcccaa cctgacagtg aggcagcacc tggaggtgta cgtctgccgtg aaaggtctca 4320
309 ggaaagggga cgcaatgatc gccatcacac ggtagtgga tgcgctcaag ctgcaggacc 4380
310 agctgaaggc tcccgtaga accttgtag aggggaataa gcgaaagctg cgttttgtgc 4440
311 tgagcatcct ggggaacccg tcagtgggtg ttctggatga gccgtcgacc gggatggacc 4500
312 ccgaggggca gcagcaaatg tggcaggtga ttccggccac ctttagaaac acggagaggg 4560
313 gcgccctcct gaccacccac tacatggcag aggcctgagg ggtgtgtgac cgagtggcca 4620
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315 gcaaagacta cctgctggag atgaagctga agaacctggc acaaatggag cccctccatg 4740
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320 cggtagaagt gaaactcttc ctgcaggaag agccttaaa ctccaaatac cctatatctt 5040
321 tctttaatcc tgtgactctt ttaaagataa tattttatag ccttaatatg ccttatatca 5100
322 gaggtggtac aaaatgcatt tgaaactcat gcaataatta tctcagtag tatttcttac 5160
323 agtgagacaa caggcaatgt cagtgagggc gatcgtaggg cataagccta agccatacca 5220
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325 atttattata gaattgtcta cttttctgag gatgtcatgg agaatgctta attttctttc 5340
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327 ccctattgac ttccgggtaa ggggagtcac ttgattaccc agcagcacag tatttgcttt 5460
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329 tcagagttaa gattgtgagt ccatgttttg tctgttgtgc ctataaagga aatttgaaat 5580
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331 tagcaaagac ttggaaccaa ccaaataacc cacaaatgat agaccggata aagaaaacgt 5700
332 gacacatata caccatggaa tactatgcag ccatagaaaa ggatgagttc atattcttca 5760
333 cagggacatg gatgaagctg gaaaccatca tctcagcaa actaacacag gaacagaaaa 5820
334 ccaaacaccg catgtttctc ctcataagtg ggaattgaac aatgagaata catggacaca 5880
335 gggaggggaa caccacaccc tggggcctgt tggggggatg ggggctaggg gagggatagc 5940
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339 <210> SEQ ID NO: 4
340 <211> LENGTH: 6181

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E--&gt; 341 &lt;212&gt; TYPE: ADN

342 &lt;213&gt; ORGANISM: Homo sapiens

344 &lt;400&gt; SEQUENCE: 4

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347 taacatgtaa ataggcatta atttttgaga aatagaaatg tttatcctta atgtattttt 180
348 aatttgctaa cattgatttt ttattttctt tcttgaaata gcttatttcc taaaatgaaa 240
349 gaattttatt tcagatgaat aatttttata tcagctattc ttatcagagc aataaacaaa 300
350 taccaatgat gcgctcagcc aacaattcat tacactctct gaagagtaac tggacaagga 360
351 gaaaaacata gggaaaaaac caacagaatt tgttggcatg ttctacacac agaccatggc 420
352 ttttcagaag ccaagctgaa taaaaacagt tttaaaagag gcaaccattt gtagaggagt 480
353 ccttgaagga ttcttcattg ttttcttgga caaaaagaga ccagtggatc caagtgttct 540
354 aaatacttct ctcttatttt cttaactcta ttgctctgca atatttactt taccctgtta 600
355 atgaacagga caaatgggtt aaaaaagaga taagcgtgcg tcaacaaatt caggctcttc 660

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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/005,338

DATE: 12/14/2001

TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

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358 cctgaacaac ctccctaaagt cctgggaagc gtggatcagt ttaatgactc tggcctggta 840
359 gtggcatata caccagtcag taacataaca caaaggataa tgaataagat ggccttggct 900
360 tcctttatga aaggaagaac agtcattggg acaccagatg aagagaccat ggatatagaa 960
361 ctcccaaaaa aataccatga aatggtggga gttatatatta gtgatacttt ctcatatcgc 1020
362 ctgaagttta attggggata tagaatccca gttataaagg agcactctga atacacagaa 1080
363 cactgttggg ccatgcatgg tgaaatTTTT tgttacttgg caaagtactg gctaaaaggg 1140
364 tttgtagctt ttcaagctgc aattaatgct gcaattatag aagtcacaac aaatcattct 1200
365 gtaatggagg agttgacatc agttattgga ataaatatga agataccacc tttcatttct 1260
366 aaggagaaaa ttatgaatga atggtttcat tttacttgc ttagtttctt ctcttctt 1320
367 atatactttg catcattaaa tgttgcaagg gaaagaggaa aatttaagaa actgatgaca 1380
368 gtaatgggtc tccgagatgc agcattctgg ctctcctggn gattgacata catttgcttc 1440
369 atcttcattha tgtccatttt tatggctctg gtcataacat caatctcaat tgtatttcat 1500
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392 aagttaacaa cagaaagtga agaaaaactt gtatatagtt tgcctttgga aaaaacgaac 2880
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Output Set: N:\CRF3\12142001\I005338.raw

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436 aaaattgata caacagttga atggaaactt ctcccacagg aagaccctta aaatgaagaa 5520
437 cctcctaaca ttcaatttta ggtcctacta cattgttagt ttccataatt ctacaagaat 5580
438 gtttcttttt acttcagtta acaaaagaaa acatttaata aacattcaat aatgattaca 5640
439 gttttcattt ttaaaaattt aggatgaagg aaacaaggaa atatagggaa aagtagtaga 5700
440 caaaattaac aaatcagac atgttattca tcccacaat ggggtctattt tgtgcttaaa 5760
441 aataatttaa aaatcataca atattagggt ggttttcggt tattatcaat aaagctaaca 5820
442 ctgagaacat ttacaaaata aaaatatgag ttttttagcc tgaacttcaa atgtatcagc 5880
443 tattttttaa cattatttac tggattcta atttaatgtg acattgacta taagaaggctc 5940
444 tgataaactg atgaaatggc acagcataac atttaattat aatgacattc tgattataaa 6000
445 ataaatgcat gtgaatttta gtacatattg aagttatatg gaagaagata gccataatct 6060
446 gtaagaaagt accgcagtta atattttctt tagccaactt atattcaatg tattttttat 6120
447 ggtacctttt tcaaaggtag tatcagtagg catagtcatt tctgtatct tttcacctca 6180
448 c

```

451 &lt;210&gt; SEQ ID NO: 5

452 &lt;211&gt; LENGTH: 1642

453 &lt;212&gt; TYPE: PRT

454 &lt;213&gt; ORGANISM: Homo sapiens

456 &lt;400&gt; SEQUENCE: 5

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/005,338

DATE: 12/14/2001

TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

```

457 Met Ser Thr Ala Ile Arg Glu Val Gly Val Trp Arg Gln Thr Arg Thr
458   1           5           10           15
460 Leu Leu Leu Lys Asn Tyr Leu Ile Lys Cys Arg Thr Lys Lys Ser Ser
461           20           25           30
463 Val Gln Glu Ile Leu Phe Pro Leu Phe Phe Leu Phe Trp Leu Ile Leu
464           35           40           45
466 Ile Ser Met Met His Pro Asn Lys Lys Tyr Glu Glu Val Pro Asn Ile
467   50           55           60
469 Glu Leu Asn Pro Met Asp Lys Phe Thr Leu Ser Asn Leu Ile Leu Gly
470  65           70           75           80
472 Tyr Thr Pro Val Thr Asn Ile Thr Ser Ser Ile Met Gln Lys Val Ser
473           85           90           95
475 Thr Asp His Leu Pro Asp Val Ile Ile Thr Glu Glu Tyr Thr Asn Glu
476           100          105          110
478 Lys Glu Met Leu Thr Ser Ser Leu Ser Lys Pro Ser Asn Phe Val Gly
479           115          120          125
481 Val Val Phe Lys Asp Ser Met Ser Tyr Glu Leu Arg Phe Phe Pro Asp
482           130          135          140
484 Met Ile Pro Val Ser Ser Ile Tyr Met Asp Ser Arg Ala Gly Cys Ser
485 145           150          155          160
487 Lys Ser Cys Glu Ala Ala Gln Tyr Trp Ser Ser Gly Phe Thr Val Leu
488           165          170          175
490 Gln Ala Ser Ile Asp Ala Ala Ile Ile Gln Leu Lys Thr Asn Val Ser
491           180          185          190
493 Leu Trp Lys Glu Leu Glu Ser Thr Lys Ala Val Ile Met Gly Glu Thr
494           195          200          205
496 Ala Val Val Glu Ile Asp Thr Phe Pro Arg Gly Val Ile Leu Ile Tyr
497           210          215          220
499 Leu Val Ile Ala Phe Ser Pro Phe Gly Tyr Phe Leu Ala Ile His Ile
500 225           230          235          240
502 Val Ala Glu Lys Glu Lys Lys Ile Lys Glu Phe Leu Lys Ile Met Gly
503           245          250          255
505 Leu His Asp Thr Ala Phe Trp Leu Ser Trp Val Leu Leu Tyr Thr Ser
506           260          265          270
508 Leu Ile Phe Leu Met Ser Leu Leu Met Ala Val Ile Ala Thr Ala Ser
509           275          280          285
511 Leu Leu Phe Pro Gln Ser Ser Ser Ile Val Ile Phe Leu Leu Phe Phe
512           290          295          300
514 Leu Tyr Gly Leu Ser Ser Val Phe Phe Ala Leu Met Leu Thr Pro Leu
515 305           310          315          320
517 Phe Lys Lys Ser Lys His Val Gly Ile Val Glu Phe Phe Val Thr Val
518           325          330          335
520 Ala Phe Gly Phe Ile Gly Leu Met Ile Ile Leu Ile Glu Ser Phe Pro
521           340          345          350
523 Lys Ser Leu Val Trp Leu Phe Ser Pro Phe Cys His Cys Thr Phe Val
524           355          360          365
526 Ile Gly Ile Ala Gln Val Met His Leu Glu Asp Phe Asn Glu Gly Ala
527           370          375          380
529 Ser Phe Ser Asn Leu Thr Ala Gly Pro Tyr Pro Leu Ile Ile Thr Ile

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/005,338

DATE: 12/14/2001

TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

```

530 385          390          395          400
532 Ile Met Leu Thr Leu Asn Ser Ile Phe Tyr Val Leu Leu Ala Val Tyr
533          405          410          415
535 Leu Asp Gln Val Ile Pro Gly Glu Phe Gly Leu Arg Arg Ser Ser Leu
536          420          425          430
538 Tyr Phe Leu Lys Pro Ser Tyr Trp Ser Lys Ser Lys Arg Asn Tyr Glu
539          435          440          445
541 Glu Leu Ser Glu Gly Asn Val Asn Gly Asn Ile Ser Phe Ser Glu Ile
542          450          455          460
544 Ile Glu Pro Val Ser Ser Glu Phe Val Gly Lys Glu Ala Ile Arg Ile
545 465          470          475          480
547 Ser Gly Ile Gln Lys Thr Tyr Arg Lys Lys Gly Glu Asn Val Glu Ala
548          485          490          495
550 Leu Arg Asn Leu Ser Phe Asp Ile Tyr Glu Gly Gln Ile Thr Ala Leu
551          500          505          510
553 Leu Gly His Ser Gly Thr Gly Lys Ser Thr Leu Met Asn Ile Leu Cys
554          515          520          525
556 Gly Leu Cys Pro Pro Ser Asp Gly Phe Ala Ser Ile Tyr Gly His Arg
557          530          535          540
559 Val Ser Glu Ile Asp Glu Met Phe Glu Ala Arg Lys Met Ile Gly Ile
560 545          550          555          560
562 Cys Pro Gln Leu Asp Ile His Phe Asp Val Leu Thr Val Glu Glu Asn
563          565          570          575
565 Leu Ser Ile Leu Ala Ser Ile Lys Gly Ile Pro Ala Asn Asn Ile Ile
566          580          585          590
568 Gln Glu Val Gln Lys Val Leu Leu Asp Leu Asp Met Gln Thr Ile Lys
569          595          600          605
571 Asp Asn Gln Ala Lys Lys Leu Ser Gly Gly Gln Lys Arg Lys Leu Ser
572          610          615          620
574 Leu Gly Ile Ala Val Leu Gly Asn Pro Lys Ile Leu Leu Leu Asp Glu
575 625          630          635          640
577 Pro Thr Ala Gly Met Asp Pro Cys Ser Arg His Ile Val Trp Asn Leu
578          645          650          655
580 Leu Lys Tyr Arg Lys Ala Asn Arg Val Thr Val Phe Ser Thr His Phe
581          660          665          670
583 Met Asp Glu Ala Asp Ile Leu Ala Asp Arg Lys Ala Val Ile Ser Gln
584          675          680          685
586 Gly Met Leu Lys Cys Val Gly Ser Ser Met Phe Leu Lys Ser Lys Trp
587          690          695          700
589 Gly Ile Gly Tyr Arg Leu Ser Met Tyr Ile Asp Lys Tyr Cys Ala Thr
590 705          710          715          720
592 Glu Ser Leu Ser Ser Leu Val Lys Gln His Ile Pro Gly Ala Thr Leu
593          725          730          735
595 Leu Gln Gln Asn Asp Gln Gln Leu Val Tyr Ser Leu Pro Phe Lys Asp
596          740          745          750
598 Met Asp Lys Phe Ser Gly Leu Phe Ser Ala Leu Asp Ser His Ser Asn
599          755          760          765
601 Leu Gly Val Ile Ser Tyr Gly Val Ser Met Thr Thr Leu Glu Asp Val
602          770          775          780

```

## RAW SEQUENCE LISTING

DATE: 12/14/2001

PATENT APPLICATION: US/10/005,338

TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

```

604 Phe Leu Lys Leu Glu Val Glu Ala Glu Ile Asp Gln Ala Asp Tyr Ser
605 785 790 795 800
607 Val Phe Thr Gln Gln Pro Leu Glu Glu Glu Met Asp Ser Lys Ser Phe
608 805 810 815
610 Asp Glu Met Glu Gln Ser Leu Leu Ile Leu Ser Glu Thr Lys Ala Ser
611 820 825 830
613 Leu Val Ser Thr Met Ser Leu Trp Lys Gln Gln Met Tyr Thr Ile Ala
614 835 840 845
616 Lys Phe His Phe Phe Thr Leu Lys Arg Glu Ser Lys Ser Val Arg Ser
617 850 855 860
619 Val Leu Leu Leu Leu Leu Ile Phe Phe Thr Val Gln Ile Phe Met Phe
620 865 870 875 880
622 Leu Val His His Ser Phe Lys Asn Ala Val Val Pro Ile Lys Leu Val
623 885 890 895
625 Pro Asp Leu Tyr Phe Leu Lys Pro Gly Asp Lys Pro His Lys Tyr Lys
626 900 905 910
628 Thr Ser Leu Leu Leu Gln Asn Ser Ala Asp Ser Asp Ile Ser Asp Leu
629 915 920 925
631 Ile Ser Phe Phe Thr Ser Gln Asn Ile Met Val Thr Met Ile Asn Asp
632 930 935 940
634 Ser Asp Tyr Val Ser Val Ala Pro His Ser Ala Ala Leu Asn Val Met
635 945 950 955 960
637 His Ser Glu Lys Asp Tyr Val Phe Ala Ala Val Phe Asn Ser Thr Met
638 965 970 975
640 Val Tyr Ser Leu Pro Ile Leu Val Asn Ile Ile Ser Asn Tyr Tyr Leu
641 980 985 990
643 Tyr His Leu Asn Val Thr Glu Thr Ile Gln Ile Trp Ser Thr Pro Phe
644 995 1000 1005
646 Phe Gln Glu Ile Thr Asp Ile Val Phe Lys Ile Glu Leu Tyr Phe Gln
647 1010 1015 1020
649 Ala Ala Leu Leu Gly Ile Ile Val Thr Ala Met Pro Pro Tyr Phe Ala
650 1025 1030 1035 1040
652 Met Glu Asn Ala Glu Asn His Lys Ile Lys Ala Tyr Thr Gln Leu Lys
653 1045 1050 1055
655 Leu Ser Gly Leu Leu Pro Ser Ala Tyr Trp Ile Gly Gln Ala Val Val
656 1060 1065 1070
658 Asp Ile Pro Leu Phe Phe Ile Ile Leu Ile Leu Met Leu Gly Ser Leu
659 1075 1080 1085
661 Leu Ala Phe His Tyr Gly Leu Tyr Phe Tyr Thr Val Lys Phe Leu Ala
662 1090 1095 1100
664 Val Val Phe Cys Leu Ile Gly Tyr Val Pro Ser Val Ile Leu Phe Thr
665 1105 1110 1115 1120
667 Tyr Ile Ala Ser Phe Thr Phe Lys Lys Ile Leu Asn Thr Lys Glu Phe
668 1125 1130 1135
E--> 670 Trp Ser Phe Ile Tyr Ser Val Ala Ala Leu Xaa Cys Ile Ala Ile Thr
671 1140 1145 1150
673 Glu Ile Thr Phe Phe Met Gly Tyr Thr Ile Ala Thr Ile Leu His Tyr
674 1155 1160 1165
676 Ala Phe Cys Ile Ile Ile Pro Ile Tyr Pro Leu Leu Gly Cys Leu Ile

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/005,338

DATE: 12/14/2001

TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

```

677      1170      1175      1180
679 Ser Phe Ile Lys Ile Ser Trp Lys Asn Val Arg Lys Asn Val Asp Thr
680 1185      1190      1195      1200
682 Tyr Asn Pro Trp Asp Arg Leu Ser Val Ala Val Ile Ser Pro Tyr Leu
683      1205      1210      1215
685 Gln Cys Val Leu Trp Ile Phe Leu Leu Gln Tyr Tyr Glu Lys Lys Tyr
686      1220      1225      1230
688 Gly Gly Arg Ser Ile Arg Lys Asp Pro Phe Phe Arg Asn Leu Ser Thr
689      1235      1240      1245
691 Lys Ser Lys Asn Arg Lys Leu Pro Glu Pro Pro Asp Asn Glu Asp Glu
692      1250      1255      1260
694 Asp Glu Asp Val Lys Ala Glu Arg Leu Lys Val Lys Glu Leu Met Gly
695 1265      1270      1275      1280
697 Cys Gln Cys Cys Glu Glu Lys Pro Ser Ile Met Val Ser Asn Leu His
698      1285      1290      1295
700 Lys Glu Tyr Asp Asp Lys Lys Asp Phe Leu Leu Ser Arg Lys Val Lys
701      1300      1305      1310
703 Lys Val Ala Thr Lys Tyr Ile Ser Phe Cys Val Lys Lys Gly Glu Ile
704      1315      1320      1325
706 Leu Gly Leu Leu Gly Pro Asn Gly Ala Gly Lys Ser Thr Ile Ile Asn
707      1330      1335      1340
709 Ile Leu Val Gly Asp Ile Glu Pro Thr Ser Gly Gln Val Phe Leu Gly
710 1345      1350      1355      1360
712 Asp Tyr Ser Ser Glu Thr Ser Glu Asp Asp Asp Ser Leu Lys Cys Met
713      1365      1370      1375
715 Gly Tyr Cys Pro Gln Ile Asn Pro Leu Trp Pro Asp Thr Thr Leu Gln
716      1380      1385      1390
718 Glu His Phe Glu Ile Tyr Gly Ala Val Lys Gly Met Ser Ala Ser Asp
719      1395      1400      1405
721 Met Lys Glu Val Ile Ser Arg Ile Thr His Ala Leu Asp Leu Lys Glu
722      1410      1415      1420
724 His Leu Gln Lys Thr Val Lys Lys Leu Pro Ala Gly Ile Lys Arg Lys
725 1425      1430      1435      1440
727 Leu Cys Phe Ala Leu Ser Met Leu Gly Asn Pro Gln Ile Thr Leu Leu
728      1445      1450      1455
730 Asp Glu Pro Ser Thr Gly Met Asp Pro Lys Ala Lys Gln His Met Trp
731      1460      1465      1470
733 Arg Ala Ile Arg Thr Ala Phe Lys Asn Arg Lys Arg Ala Ala Ile Leu
734      1475      1480      1485
736 Thr Thr His Tyr Met Glu Glu Ala Glu Ala Val Cys Asp Arg Val Ala
737      1490      1495      1500
739 Ile Met Val Ser Gly Gln Leu Arg Cys Ile Gly Thr Val Gln His Leu
740 1505      1510      1515      1520
742 Lys Ser Lys Phe Gly Lys Gly Tyr Phe Leu Glu Ile Lys Leu Lys Asp
743      1525      1530      1535
745 Trp Ile Glu Asn Leu Glu Val Asp Arg Leu Gln Arg Glu Ile Gln Tyr
746      1540      1545      1550
748 Ile Phe Pro Asn Ala Ser Arg Gln Glu Ser Phe Ser Ser Ile Leu Ala
749      1555      1560      1565

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/005,338

DATE: 12/14/2001

TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

```

751 Tyr Lys Ile Pro Lys Glu Asp Val Gln Ser Leu Ser Gln Ser Phe Phe
752      1570                      1575                      1580
754 Lys Leu Glu Glu Ala Lys His Ala Phe Ala Ile Glu Glu Tyr Ser Phe
755 1585                      1590                      1595                      1600
757 Ser Gln Ala Thr Leu Glu Gln Val Phe Val Glu Leu Thr Lys Glu Gln
758                      1605                      1610                      1615
760 Glu Glu Glu Asp Asn Ser Cys Gly Thr Leu Asn Ser Thr Leu Trp Trp
761                      1620                      1625                      1630
763 Glu Arg Thr Gln Glu Asp Arg Val Val Phe
764                      1635                      1640
1396 <210> SEQ ID NO: 8
1397 <211> LENGTH: 1543
1398 <212> TYPE: PRT
1399 <213> ORGANISM: Homo sapiens
1401 <400> SEQUENCE: 8
1402 Met Asn Lys Met Ala Leu Ala Ser Phe Met Lys Gly Arg Thr Val Ile
1403      1                      5                      10                      15
1405 Gly Thr Pro Asp Glu Glu Thr Met Asp Ile Glu Leu Pro Lys Lys Tyr
1406                      20                      25                      30
1408 His Glu Met Val Gly Val Ile Phe Ser Asp Thr Phe Ser Tyr Arg Leu
1409                      35                      40                      45
1411 Lys Phe Asn Trp Gly Tyr Arg Ile Pro Val Ile Lys Glu His Ser Glu
1412      50                      55                      60
1414 Tyr Thr Glu His Cys Trp Ala Met His Gly Glu Ile Phe Cys Tyr Leu
1415      65                      70                      75                      80
1417 Ala Lys Tyr Trp Leu Lys Gly Phe Val Ala Phe Gln Ala Ala Ile Asn
1418                      85                      90                      95
1420 Ala Ala Ile Ile Glu Val Thr Thr Asn His Ser Val Met Glu Glu Leu
1421                      100                     105                     110
1423 Thr Ser Val Ile Gly Ile Asn Met Lys Ile Pro Pro Phe Ile Ser Lys
1424                      115                     120                     125
1426 Gly Glu Ile Met Asn Glu Trp Phe His Phe Thr Cys Leu Val Ser Phe
1427                      130                     135                     140
1429 Ser Ser Phe Ile Tyr Phe Ala Ser Leu Asn Val Ala Arg Glu Arg Gly
1430 145                      150                      155                      160
1432 Lys Phe Lys Lys Leu Met Thr Val Met Gly Leu Arg Glu Ser Ala Phe
1433                      165                      170                      175
E--> 1435 Trp Leu Ser Trp Xaa Leu Thr Tyr Ile Cys Phe Ile Phe Ile Met Ser
1436                      180                      185                      190
1438 Ile Phe Met Ala Leu Val Ile Thr Ser Ile Ser Ile Val Phe His Thr
1439                      195                      200                      205
1441 Gly Phe Met Val Ile Phe Thr Leu Tyr Ser Leu Tyr Gly Leu Ser Leu
1442                      210                      215                      220
1444 Ile Ala Leu Ala Phe Leu Met Ser Val Leu Ile Arg Lys Pro Met Leu
1445 225                      230                      235                      240
1447 Ala Gly Leu Ala Gly Phe Leu Phe Thr Val Phe Trp Gly Cys Leu Gly
1448                      245                      250                      255
1450 Phe Thr Val Leu Tyr Arg Gln Leu Pro Leu Ser Leu Gly Trp Val Leu
1451                      260                      265                      270

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/005,338

DATE: 12/14/2001

TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

```

1453 Ser Leu Leu Ser Pro Phe Ala Phe Thr Ala Gly Met Ala Gln Val Thr
1454      275      280      285
1456 His Leu Asp Asn Tyr Leu Ser Gly Val Ile Phe Pro Asp Pro Ser Gly
1457      290      295      300
1459 Asp Ser Tyr Lys Met Ile Ala Thr Phe Phe Ile Leu Ala Phe Asp Thr
1460 305      310      315      320
1462 Leu Phe Tyr Leu Ile Phe Thr Leu Tyr Phe Glu Arg Val Leu Pro Asp
1463      325      330      335
1465 Lys Asp Gly His Gly Asp Ser Pro Leu Phe Phe Leu Lys Ser Ser Phe
1466      340      345      350
1468 Trp Ser Lys His Gln Asn Thr His His Glu Ile Phe Glu Asn Glu Ile
1469      355      360      365
1471 Asn Pro Glu His Ser Ser Asp Asp Ser Phe Glu Pro Val Ser Pro Glu
1472      370      375      380
1474 Phe His Gly Lys Glu Ala Ile Arg Ile Arg Asn Val Ile Lys Glu Tyr
1475 385      390      395      400
1477 Asn Gly Lys Thr Gly Lys Val Glu Ala Leu Gln Gly Ile Phe Phe Asp
1478      405      410      415
1480 Ile Tyr Glu Gly Gln Ile Thr Ala Ile Leu Gly His Asn Gly Ala Gly
1481      420      425      430
1483 Lys Ser Thr Leu Leu Asn Ile Leu Ser Gly Leu Ser Val Ser Thr Glu
1484      435      440      445
1486 Gly Ser Ala Thr Ile Tyr Asn Thr Gln Leu Ser Glu Ile Thr Asp Met
1487      450      455      460
1489 Glu Glu Ile Arg Lys Asn Ile Gly Phe Cys Pro Gln Phe Asn Phe Gln
1490 465      470      475      480
1492 Phe Asp Phe Leu Thr Val Arg Glu Asn Leu Arg Val Phe Ala Lys Ile
1493      485      490      495
1495 Lys Gly Ile Gln Pro Lys Glu Val Glu Gln Glu Val Lys Arg Ile Ile
1496      500      505      510
1498 Met Glu Leu Asp Met Gln Ser Ile Gln Asp Ile Ile Ala Lys Lys Leu
1499      515      520      525
1501 Ser Gly Gly Gln Lys Arg Lys Leu Thr Leu Gly Ile Ala Ile Leu Gly
1502      530      535      540
1504 Asp Pro Gln Val Leu Leu Leu Asp Glu Pro Thr Ala Gly Leu Asp Pro
1505 545      550      555      560
1507 Phe Ser Arg His Arg Val Trp Ser Leu Leu Lys Glu His Lys Val Asp
1508      565      570      575
1510 Arg Leu Ile Leu Phe Ser Thr Gln Phe Met Asp Glu Ala Asp Ile Leu
1511      580      585      590
1513 Ala Asp Arg Lys Val Phe Leu Ser Asn Gly Lys Leu Lys Cys Ala Gly
1514      595      600      605
1516 Ser Ser Leu Phe Leu Lys Arg Lys Trp Gly Ile Gly Tyr His Leu Ser
1517      610      615      620
1519 Leu His Arg Asn Glu Met Cys Asp Thr Glu Lys Ile Thr Ser Leu Ile
1520 625      630      635      640
1522 Lys Gln His Ile Pro Asp Ala Lys Leu Thr Thr Glu Ser Glu Glu Lys
1523      645      650      655
1525 Leu Val Tyr Ser Leu Pro Leu Glu Lys Thr Asn Lys Phe Pro Asp Leu

```



## RAW SEQUENCE LISTING

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TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

```

1526          660          665          670
1528 Tyr Ser Asp Leu Asp Lys Cys Ser Asp Gln Gly Ile Arg Asn Tyr Ala
1529          675          680          685
1531 Val Ser Val Thr Ser Leu Asn Glu Val Phe Leu Asn Leu Glu Gly Lys
1532          690          695          700
1534 Ser Ala Ile Asp Glu Pro Asp Phe Asp Ile Gly Lys Gln Glu Lys Ile
1535 705          710          715          720
1537 His Val Thr Arg Asn Thr Gly Asp Glu Ser Glu Met Glu Gln Val Leu
1538          725          730          735
1540 Cys Ser Leu Pro Glu Thr Arg Lys Ala Val Ser Ser Ala Ala Leu Trp
1541          740          745          750
1543 Arg Arg Gln Ile Tyr Ala Val Ala Thr Leu Arg Phe Leu Lys Leu Arg
1544          755          760          765
1546 Arg Glu Arg Arg Ala Leu Leu Cys Leu Leu Leu Val Leu Gly Ile Ala
1547          770          775          780
1549 Phe Ile Pro Ile Ile Leu Glu Lys Ile Met Tyr Lys Val Thr Arg Glu
1550 785          790          795          800
1552 Thr His Cys Trp Glu Phe Ser Pro Ser Met Tyr Phe Leu Ser Leu Glu
1553          805          810          815
1555 Gln Ile Pro Lys Thr Pro Leu Thr Ser Leu Leu Ile Val Asn Asn Thr
1556          820          825          830
1558 Gly Ser Asn Ile Glu Asp Leu Val His Ser Leu Lys Cys Gln Asp Ile
1559          835          840          845
1561 Val Leu Glu Ile Asp Asp Phe Arg Asn Arg Asn Gly Ser Asp Asp Pro
1562          850          855          860
1564 Ser Tyr Asn Gly Ala Ile Ile Val Ser Gly Asp Gln Lys Asp Tyr Arg
1565 865          870          875          880
1567 Phe Ser Val Ala Cys Asn Thr Lys Lys Leu Asn Cys Phe Pro Val Leu
1568          885          890          895
1570 Met Gly Ile Val Ser Asn Ala Leu Met Gly Ile Phe Asn Phe Thr Glu
1571          900          905          910
1573 Leu Ile Gln Thr Glu Ser Thr Ser Phe Ser Arg Asp Asp Ile Val Leu
1574          915          920          925
1576 Asp Leu Gly Phe Ile Asp Gly Ser Ile Phe Leu Leu Leu Ile Thr Asn
1577          930          935          940
1579 Cys Val Ser Pro Phe Ile Gly Met Ser Ser Ile Ser Asp Tyr Lys Lys
1580 945          950          955          960
1582 Asn Val Gln Ser Gln Leu Trp Ile Ser Gly Leu Trp Pro Ser Ala Tyr
1583          965          970          975
1585 Trp Cys Gly Gln Ala Leu Val Asp Ile Pro Leu Tyr Phe Leu Ile Leu
1586          980          985          990
1588 Phe Ser Ile His Leu Ile Tyr Tyr Phe Ile Phe Leu Gly Phe Gln Leu
1589          995          1000          1005
1591 Ser Trp Glu Leu Met Phe Val Leu Val Val Cys Ile Ile Gly Cys Ala
1592          1010          1015          1020
1594 Val Ser Leu Ile Phe Leu Thr Tyr Val Leu Ser Phe Ile Phe Arg Lys
1595 1025          1030          1035          1040
1597 Trp Arg Lys Asn Asn Gly Phe Trp Ser Phe Gly Phe Phe Ile Ile Leu
1598          1045          1050          1055

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/005,338

DATE: 12/14/2001

TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

```

1600 Ile Cys Val Ser Thr Ile Met Val Ser Thr Gln Tyr Glu Lys Leu Asn
1601           1060           1065           1070
1603 Leu Ile Leu Cys Met Ile Phe Ile Pro Ser Phe Thr Leu Leu Gly Tyr
1604           1075           1080           1085
1606 Val Met Leu Leu Ile Gln Leu Asp Phe Met Arg Asn Leu Asp Ser Leu
1607           1090           1095           1100
1609 Asp Asn Arg Ile Asn Glu Val Asn Lys Thr Ile Leu Leu Thr Thr Leu
1610 1105           1110           1115           1120
1612 Ile Pro Tyr Leu Gln Ser Val Ile Phe Leu Phe Val Ile Arg Cys Leu
1613           1125           1130           1135
1615 Glu Met Lys Tyr Gly Asn Glu Ile Met Asn Lys Asp Pro Val Phe Arg
1616           1140           1145           1150
1618 Ile Ser Pro Arg Ser Arg Glu Thr His Pro Asn Pro Glu Glu Pro Glu
1619           1155           1160           1165
1621 Glu Glu Asp Glu Asp Val Gln Ala Glu Arg Val Gln Ala Ala Asn Ala
1622           1170           1175           1180
1624 Leu Thr Ala Pro Asn Leu Glu Glu Glu Pro Val Ile Thr Ala Ser Cys
1625 1185           1190           1195           1200
1627 Leu His Lys Glu Tyr Tyr Glu Thr Lys Lys Ser Cys Phe Ser Thr Arg
1628           1205           1210           1215
1630 Lys Lys Lys Ile Ala Ile Arg Asn Val Ser Phe Cys Val Lys Lys Gly
1631           1220           1225           1230
1633 Glu Val Leu Gly Leu Leu Gly His Asn Gly Ala Gly Lys Ser Thr Ser
1634           1235           1240           1245
1636 Ile Lys Met Ile Thr Gly Cys Thr Lys Pro Thr Ala Gly Val Val Val
1637           1250           1255           1260
1639 Leu Gln Gly Ser Arg Ala Ser Val Arg Gln Gln His Asp Asn Ser Leu
1640 1265           1270           1275           1280
1642 Lys Phe Leu Gly Tyr Cys Pro Gln Glu Asn Ser Leu Trp Pro Lys Leu
1643           1285           1290           1295
1645 Thr Met Lys Glu His Leu Glu Leu Tyr Ala Ala Val Lys Gly Leu Gly
1646           1300           1305           1310
1648 Lys Glu Asp Ala Ala Leu Ser Ile Ser Arg Leu Val Glu Ala Leu Lys
1649           1315           1320           1325
1651 Leu Gln Glu Gln Leu Lys Ala Pro Val Lys Thr Leu Ser Glu Gly Ile
1652           1330           1335           1340
1654 Lys Arg Lys Leu Cys Phe Val Leu Ser Ile Leu Gly Asn Pro Ser Val
1655 1345           1350           1355           1360
1657 Val Leu Leu Asp Glu Pro Phe Thr Gly Met Asp Pro Glu Gly Gln Gln
1658           1365           1370           1375
1660 Gln Met Trp Gln Ile Leu Gln Ala Thr Val Lys Asn Lys Glu Arg Gly
1661           1380           1385           1390
1663 Thr Leu Leu Thr Thr His Tyr Met Ser Glu Ala Glu Ala Val Cys Asp
1664           1395           1400           1405
1666 Arg Met Ala Met Met Val Ser Gly Thr Leu Arg Cys Ile Gly Ser Ile
1667           1410           1415           1420
1669 Gln His Leu Lys Asn Lys Phe Gly Arg Asp Tyr Leu Leu Glu Ile Lys
1670 1425           1430           1435           1440
1672 Met Lys Glu Pro Thr Gln Val Glu Ala Leu His Thr Glu Ile Leu Lys

```

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/005,338

DATE: 12/14/2001  
TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

```

1673          1445          1450          1455
1675 Leu Phe Pro Gln Ala Ala Trp Gln Glu Arg Tyr Ser Ser Leu Met Ala
1676          1460          1465          1470
1678 Tyr Lys Leu Pro Val Glu Asp Val His Pro Leu Ser Arg Ala Phe Phe
1679          1475          1480          1485
1681 Lys Leu Glu Ala Met Lys Gln Thr Phe Asn Leu Glu Glu Tyr Ser Leu
1682          1490          1495          1500
1684 Ser Gln Ala Thr Leu Glu Gln Val Phe Leu Glu Leu Cys Lys Glu Gln
1685 1505          1510          1515          1520
1687 Glu Leu Gly Asn Val Asp Asp Lys Ile Asp Thr Thr Val Glu Trp Lys
1688          1525          1530          1535
1690 Leu Leu Pro Gln Glu Asp Pro
1691          1540
1695 <210> SEQ ID NO: 9
1696 <211> LENGTH: 130
E--> 1697 <212> TYPE: ADN
1698 <213> ORGANISM: Homo sapiens
1700 <400> SEQUENCE: 9
1701 ctgctggagt aggcacccat ttaaagaaaa aatgaagaag cagcaataaa gaagttgtaa 60
1702 tcgttaccta gacaaacaga gaactgggtt tgacagtgtt tctagagtgc tttttattat 120
1703 tttcctgaca                                     130
1706 <210> SEQ ID NO: 10
1707 <211> LENGTH: 141
E--> 1708 <212> TYPE: ADN
1709 <213> ORGANISM: Homo sapiens
1711 <400> SEQUENCE: 10
1712 gttgtgttcc accatgatta ctttctcctt cagcgaatag gctaaatgaa tatgaaacag 60
1713 aaaagcgtgt atcagcaaac caaagcactt ctgtgcaaga attttcttaa gaaatggagg 120
1714 atgaaaagag agagcttatt g                                     141
1717 <210> SEQ ID NO: 11
1718 <211> LENGTH: 205
E--> 1719 <212> TYPE: ADN
1720 <213> ORGANISM: Homo sapiens
1722 <400> SEQUENCE: 11
1723 gaatggggcc tctcaatact tctaggactg tgtattgctc tgttttccag ttccatgaga 60
1724 aatgtccagt ttcctggaat ggctcctcag aatctgggaa gggtagataa atttaatagc 120
1725 tcttctttta tggttgtgta tacaccaata tctaatttaa cccagcagat aatgaataaa 180
1726 acagcacttg ctctcttttt gaaag                                     205
1729 <210> SEQ ID NO: 12
1730 <211> LENGTH: 159
E--> 1731 <212> TYPE: ADN
1732 <213> ORGANISM: Homo sapiens
1734 <400> SEQUENCE: 12
1735 gaacaagtgt cattggggca ccaaataaaa cacacatgga cgaaatactt ctggaaaatt 60
1736 taccatatgc tatgggaatc atctttaatg aaactttctc ttataagtta atatttttcc 120
1737 agggatataa cagtccactt tggaaagaag atttctcag                                     159
1740 <210> SEQ ID NO: 13
1741 <211> LENGTH: 104
E--> 1742 <212> TYPE: ADN

```

## RAW SEQUENCE LISTING

DATE: 12/14/2001

PATENT APPLICATION: US/10/005,338

TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

```

1743 <213> ORGANISM: Homo sapiens
1745 <400> SEQUENCE: 13
1746 ctcattgctg ggatggatat ggtgagtttt catgtacatt gaccaaatac tggaatagag 60
1747 gatttggtggc ttacaaaca gctattaata ctgccattat agaa 104
1750 <210> SEQ ID NO: 14
1751 <211> LENGTH: 227
E--> 1752 <212> TYPE: ADN
1753 <213> ORGANISM: Homo sapiens
1755 <400> SEQUENCE: 14
1756 atcacaacca atcacctgt gatggaggag ttgatgtcag ttactgctat aactatgaag 60
1757 acattacctt tcataactaa aaatcttctt cacaatgaga tgtttatttt attcttcttg 120
1758 cttcatttct cccacttgt atattttata tcaactaatg taacaaaaga gagaaaaaag 180
1759 tctaagaatt tgatgaaaat gatgggtctc caagattcag cattctg 227
1762 <210> SEQ ID NO: 15
1763 <211> LENGTH: 142
E--> 1764 <212> TYPE: ADN
1765 <213> ORGANISM: Homo sapiens
1767 <400> SEQUENCE: 15
1768 gctctcttgg ggtctaattc atgctggctt catctttatt atttccatat tcattacaat 60
1769 tatcataaca ttaccccaa ttatagtcac gactggcttc atggtcatat ttatactctt 120
1770 ttttttatat ggcttatctt tg 142
1773 <210> SEQ ID NO: 16
1774 <211> LENGTH: 186
E--> 1775 <212> TYPE: ADN
1776 <213> ORGANISM: Homo sapiens
1778 <400> SEQUENCE: 16
1779 gtagcttttg tgctcctgat gagtggtgctg ttaaagaaag ctgtcctcac caatttggtt 60
1780 gtgtttctcc ttacctctt ttggggatgt ctgggattca ctgtatttta tgaacaactt 120
1781 ccttcatctc tggagtggat tttgaatatt tgtagccctt ttgcctttac tactggaatg 180
1782 attcag 186
1785 <210> SEQ ID NO: 17
1786 <211> LENGTH: 148
E--> 1787 <212> TYPE: ADN
1788 <213> ORGANISM: Homo sapiens
1790 <400> SEQUENCE: 17
1791 attatcaaac tggattataa cttgaatggt gtaatttttc ctgacccttc aggagactca 60
1792 tatacaatga tagcaacttt ttctatgttg cttttggatg gtctcatcta cttgctattg 120
1793 gcattatact ttgacaaaat ttacctt 148
1796 <210> SEQ ID NO: 18
1797 <211> LENGTH: 169
E--> 1798 <212> TYPE: ADN
1799 <213> ORGANISM: Homo sapiens
1801 <400> SEQUENCE: 18
1802 atggagatga ggcgcattat tctcctttat ttttcttgaa ttcatcatct tgtttccaac 60
1803 accaaaggac taatgctaag gttattgaga aagaaatcga tgctgagcat ccctctgatg 120
1804 attattttga accagtagct cctgaattcc aaggaaaaga agccatcag 169
1807 <210> SEQ ID NO: 19
1808 <211> LENGTH: 59
E--> 1809 <212> TYPE: ADN

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/005,338

DATE: 12/14/2001

TIME: 11:07:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

```

1810 <213> ORGANISM: Homo sapiens
1812 <400> SEQUENCE: 19
1813 aatcagaaat gttaagaagg aatataaagg aaaatctgga aaagtggaag cattgaaag 59
1816 <210> SEQ ID NO: 20
1817 <211> LENGTH: 111
E--> 1818 <212> TYPE: ADN
1819 <213> ORGANISM: Homo sapiens
1821 <400> SEQUENCE: 20
1822 gottgctctt tgacatatat gaaggtcaaa tcacggcaat cctgggtcac agtggagctg 60
1823 gcaaattctt actgctaaat attcttaatg gattgtctgt tccaacagaa g 111
1826 <210> SEQ ID NO: 21
1827 <211> LENGTH: 176
E--> 1828 <212> TYPE: ADN
1829 <213> ORGANISM: Homo sapiens
1831 <400> SEQUENCE: 21
1832 gatcagttac catctataat aaaaatctct ctgaaatgca agacttggag gaaatcagaa 60
1833 agataactgg cgtctgtcct caattcaatg ttcaatttga catactcacc gtgaaggaaa 120
1834 acctcagcct gtttgctaaa ataaaaggga ttcactctaaa ggaagtggaa caagag 176
1837 <210> SEQ ID NO: 22
1838 <211> LENGTH: 120
E--> 1839 <212> TYPE: ADN
1840 <213> ORGANISM: Homo sapiens
1842 <400> SEQUENCE: 22
1843 gtacaacgaa tattattgga attggacatg caaaacattc aagataacct tgctaaacat 60
1844 ttaagtgaag gacagaaaag aaagctgact ttggggatta ccatttttagg agatcctcaa 120
1847 <210> SEQ ID NO: 23
1848 <211> LENGTH: 139
E--> 1849 <212> TYPE: ADN
1850 <213> ORGANISM: Homo sapiens
1852 <400> SEQUENCE: 23
1853 attttgcttt tagatgaacc aactactgga ttggatccct tttccagaga tcaagtgtgg 60
1854 agcctcctga gagagcgtag agcagatcat gtgacccctt tcagtaccca gtccatggat 120
1855 gaggtgaca tcttggtg 139
1858 <210> SEQ ID NO: 24
1859 <211> LENGTH: 91
E--> 1860 <212> TYPE: ADN
1861 <213> ORGANISM: Homo sapiens
1863 <400> SEQUENCE: 24
1864 atagaaaagt gatcatgtcc aatgggagac tgaagtgtgc aggttcttct atgtttttga 60
1865 aaagaagggt gggctcttga tatcacctaa g 91

```

## VERIFICATION SUMMARY

PATENT APPLICATION: US/10/005,338

DATE: 12/14/2001

TIME: 11:07:28

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:19 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:136 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:233 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:341 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:670 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:5  
L:1435 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:8  
L:1697 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1708 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1719 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1731 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1742 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1752 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1764 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1775 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1787 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1798 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1809 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1818 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1828 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1839 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1849 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1860 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1870 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1881 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1891 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1903 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1914 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1925 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1936 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1946 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1957 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1967 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1977 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1987 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:1997 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2008 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2018 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2028 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2039 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2049 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2059 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2069 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2080 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2090 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2099 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2114 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2125 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:

## VERIFICATION SUMMARY

PATENT APPLICATION: US/10/005,338

DATE: 12/14/2001

TIME: 11:07:28

Input Set : A:\ES.txt

Output Set: N:\CRF3\12142001\I005338.raw

L:2135 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2147 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2158 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2168 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
L:2180 M:310 E: (3) Wrong or Missing Sequence Type, TYPE: